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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,626	08/28/2003	Elliott K. Stava	LEEE2 12301-I-1	7514
7590	06/01/2004		EXAMINER	
ROBERT V. VICKERS FAY, SHARPE, FAGAN, MINNICH & McKEE Seventh Floor 1100 Superior Avenue Cleveland, OH 44114-2579			SHAW, CLIFFORD C	
			ART UNIT	PAPER NUMBER
			1725	
			DATE MAILED: 06/01/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/650,626	STAVA ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Clifford C Shaw	1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 4/9/2004.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 82-119, 121-127, 129-133, 135, and 136 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 82-116, 119, 127 and 133 is/are allowed.  
 6) Claim(s) 117, 118, 121-126, 129-132, 135 and 136 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

**Detailed Action**

1.) The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2.) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.) Claims 117, 118, 121-126, 129-132, 135, and 136 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 117, lines 6-7, there is no antecedent basis for the plural “said waveforms” or for “said other waveform”. In claims 125 and 130, paragraph b of both claims, there is no antecedent basis for “said first and second waveforms”. It is not clear what the scopes of the claims are because of these instances of missing antecedent basis. The other claims are inadequate under 35USC112 in that they depend from inadequate claims.

4.) Claims 117, 118, 121-126, 129-132, 135, and 136 are rejected under 35 U.S.C. 103(a) as being unpatentable over the German document no. DE3735834 taken with either one of Gowan (3,420,979) or Endo et al. (3,627,978). In regard to the rejection under 35USC112 above, claim 117 is interpreted to be directed to a method that includes two waveforms with different numbers of current pulses, and claims 125 and 130 are interpreted to be directed to methods having two waveforms at least partially synchronized. The English abstracts and the

waveforms shown in figure 1 of German document no. DE3735834 disclose certain of the subject matter claimed including: passing first and second waveforms through first and second electrodes labeled “1.Elektrode” and 2.Elektrode” in figure 1, wherein the waveforms are at least partially synchronized to cause welding currents to pass through the electrodes at least partially at the same time as per claim 117 and the waveforms have different numbers of current pulses in a unit time as per claim 117, at least partially offsetting the waveforms by a controlled length of time, this offset due to their different frequencies, and at least partially controlling the polarities of the different waveforms due to their different frequencies as per claim 130. In regard to claims 122, 129, and 136, note that the first and second waveforms in the German document no. DE3735834 are “substantially” the same in that they are both square waves. The claims differ from the German document no. DE3735834 in calling for moving the welding electrodes in unison along the weld joint. This difference does not patentably distinguish over the prior art. Although the German document no. DE3735834 does not explicitly mention electrode/workpiece movement, there must be some type of relative motion between the electrode and workpiece in German document no. DE3735834 in order to weld along a seam as would be present in a workpiece welded by the German arrangement. At the time applicant’s invention was made, it would have been obvious to have implemented this relative motion by moving the electrodes along the joint, the motivation being the teachings of either one of Gowan (3,420,979) or Endo et al. (3,627,978) that it is advantageous to move plural submerged arc welding electrodes along a joint to be welded (see elements 1-3 and the discussion thereof in Gowan (3,420,979) and see figure 34 and the motion element 43 and the further discussion in columns 7-8 of Endo et al. (3,627,978)).

5.) Claims 82-116, 119, 127, and 133 are allowable over the prior art of record.

6.) Applicant's arguments filed 4/9/2004 have been fully considered but they are not persuasive. The rejected claims are considered unpatentable for the reasons set forth above. Applicant argues that claim 117 distinguishes over the prior art because it calls for waveforms with different numbers of current pulses. This argument is not persuasive. The waveforms shown in figure 1 of the applied German document no. DE3735834 have different numbers of current pulses in a unit time period (they are of different frequencies). Applicant argues that claims 125 and 130 distinguish over the prior art because they call for partially synchronized waveforms. This argument is not persuasive. The waveforms in figure 1 of the German document are partially synchronized in the manner claimed in that they periodically have the same polarity and periodically have the same zero crossings.

**7.) THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

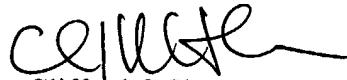
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Clifford C Shaw  
Primary Examiner  
Art Unit 1725

May 27, 2004